

Response to Amendment

Applicant's response, filed on 7/24/2009, with respect to the rejection(s) of claim(s) 25-31, 36-44, 46-48 under 102 (b) has been fully considered. However, upon further consideration, the allowable subject matter has been withdrawn in view of the references to Fridhjof and Eigler.

Claim Objections

Claims 40 and 46 are objected to because of the following informalities: In line 3, "the obstacle" should be replaced with --object--. Appropriate correction is required.

Claim 46 appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Fridhjof (US 2006/0261975).

Fridhjof teaches a device for object recognition, the device comprising: a signal source 19, adapted to generate at least one electromagnetic wave which may be reflected by an object 20; a receiver 21 or 22 for receiving the at least one electromagnetic wave (18) reflected by the object (16); and an evaluation unit 23 that evaluates e a polarization of the at least one

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electromagnetic wave reflected by the object(16) and received by the receiver (14) and generates at least one evaluation signal (see Fig. 4-7, paragraphs 0076-0078), wherein the device is used in a warning system for obstacle and/or slippery ice and/or a recognition system for roadway conditions (see abstract, lines 6 and 7).

As to Claim 26-28, 31 the evaluation unit 23 is adapted to determine a rotation angle of the polarization between the at least one electromagnetic wave, reflected by the object 20 and received by the receiver and an electromagnetic wave emitted by the signal source, is adapted to determine a type of polarization of the at least one electromagnetic wave reflected by the object and received by the receiver , is adapted to determine a wavelength of the at least one electromagnetic wave reflected by the object and received by the receiver; the evaluation unit 23 is adapted to determine on a basis of the evaluated polarization, to evaluate the properties of polarization of at least two electromagnetic waves with different wavelengths, to evaluate the ratio of the two electromagnetic waves.

As to Claim 29, wherein the signal source is adapted to change at least one of an angle of polarization, a level of polarization and a type of polarization of the generated at least one electromagnetic wave, in order to generate at least two differently polarized electromagnetic waves (with polarization filter 24).

As to Claim 30, the signal source (10) is adapted to change the wavelength of the generated at least one electromagnetic wave (12), in particular to generate at least two electromagnetic waves (12) with different wavelengths (see fig. 4 and corresponding description).

As to Claims 36, the receiver 22 or 21 is adapted to change its receiving characteristics controlled by the evaluation unit 23.

As to Claim 37, the signal source 19 is adapted to generate at least one linear, circular or elliptically polarized electromagnetic wave, having a wavelength in the region of visible light (see paragraph 0076).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32-34, 45, 39-43, 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fridhjof (US 2006/0261975), as applied to claim 30 above, and further in view of Eigler (US 5,229,943).

AS to Claims 32-34, Fridhjof disclose all as applied to Claim 30, however the reference does not specifically describe the details of safety system of vehicle including evaluation unit, comparison unit (comparing the evaluation signal with a threshold value), and a control unit adapted to trigger safety device when the evaluation signal exceed the threshold value. Eigler teaches all of the features of a passenger protection system indicated above (see abstract). It would be obvious to one of ordinary skill in the art at the time the invention was conceived to use the passenger protection system of Eigler in the invention of Fridhjof in order to detect the

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slippery road condition and protect the driver/passengers in case of accidents or warn the driver/passenger of the existing conditions.

As to claim 45, a method of object recognition comprising: generating and emitting at least one electromagnetic wave, wherein the at least one electromagnetic wave; reflected by an object; receiving at least one electromagnetic wave reflected by the object; evaluating a polarization of the received electromagnetic wave; and generating an evaluation signal based on the evaluation of the received electromagnetic wave, determining a surface of the object based on the evaluation polarization.

However, the reference does not specifically describe controlling a passenger protection system based on the determined surface structure. Eigler teaches a passenger protection system (see abstract). It would be obvious to one of ordinary skill in the art at the time the invention was conceived to use the passenger protection system of Eigler in the invention of Fridhjoef in order to detect the slippery road condition and protect the driver/passengers in case of accidents or warn the driver/passenger of the existing conditions.

As to claims 39-43, Fridhjoef teaches a rotation angle of the polarization between the at least one electromagnetic wave, reflected by the object 20 and received and emitted, is determined; a type of polarization of the at least one electromagnetic wave, reflected by the object and received, is determined; a wavelength of the at least one electromagnetic wave, reflected by the object 20 and received, is determined; at least one of an angle of polarization, a level of polarization and a type of polarization of the generated at least one electromagnetic wave is changed, wherein two or more electromagnetic waves having polarizations different from each other are emitted; a wavelength of the generated at least one electromagnetic wave is changed,

wherein two or more electromagnetic waves having wavelengths different from each other are emitted (see Fig. 6 and corresponding description).

AS to Claims 46-48, Fridhjof teaches one of emitting characteristics is changed; at least one linear, circular or elliptically polarized electromagnetic wave, having a wavelength in the region of visible light, is generated; and a non-polarized electromagnetic wave is emitted and its reflection at the object is analyzed with regard to properties of polarization portions and directions contained in the reflected wave, and information thus obtained is compared with stored information on polarizations of reflected waves at certain materials(see Fig. 6 and corresponding description).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. G. Lauchman whose telephone number is (571) 272-2418. The examiner's normal work schedule is 8:00am to 4:30pm (EST), Monday through Friday. If attempts to reach examiner by the telephone are unsuccessful, the examiner's supervisor Gregory J. Toatley, Jr. can be reached on (571) 272-2059, ext. 77.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC receptionist whose telephone number is (571) 272-1562.

/L. G. Lauchman/
Primary Examiner, Art Unit 2877

10/30/2009